SCHOOL SAFETY

What Can Schools Learn from America's Busiest Airports

2019

CORGAN

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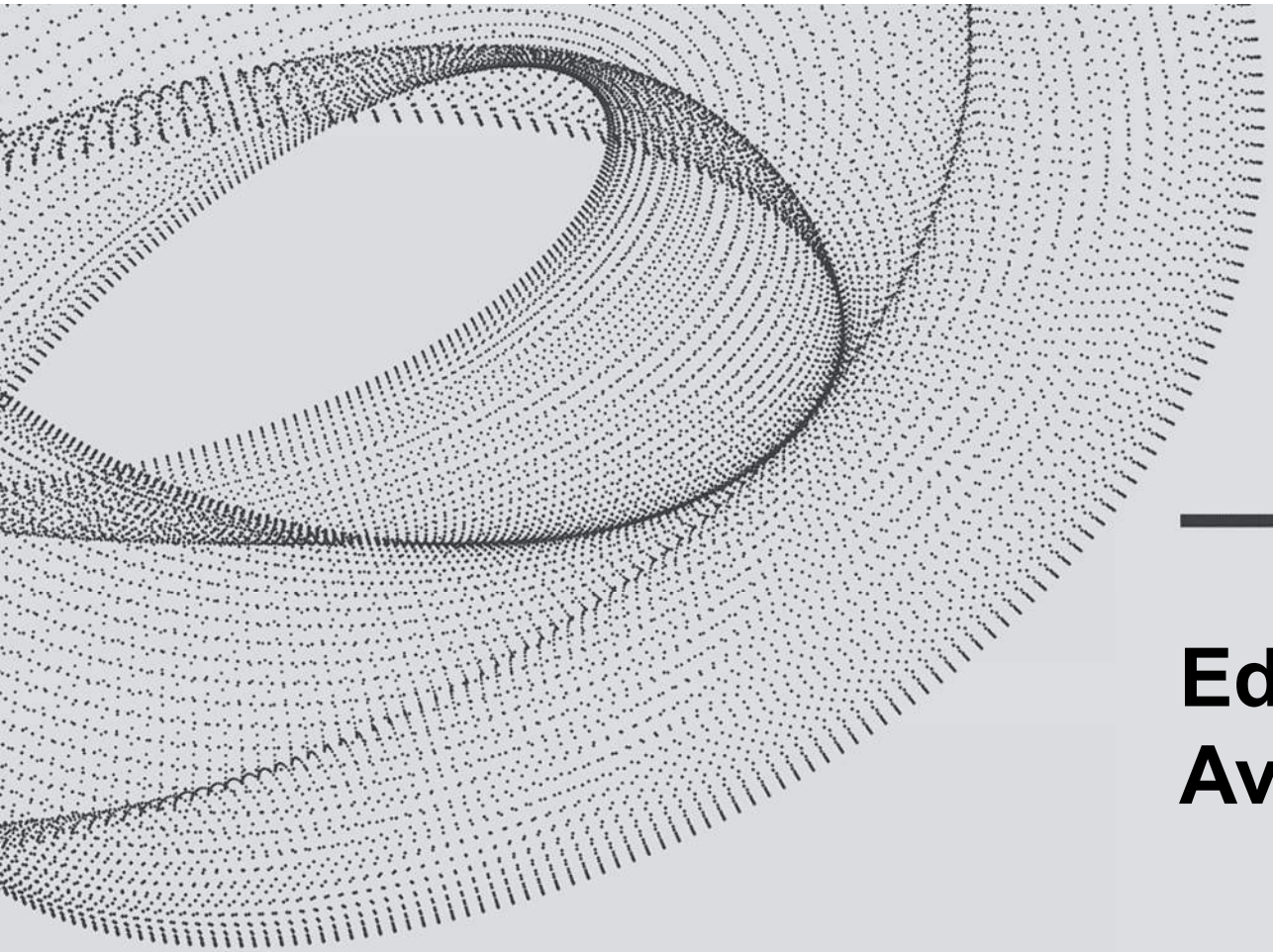
Learning Objectives

1. Understand airport security, how it has changed, and how it can be applied to school safety.

2. Understand the challenges of security and safety in both airports and schools.

3. Explore ways to incorporate seamless, unobtrusive security design measures, prioritizing the mental, physical, and emotional health of the occupants.

4. Gain tools and strategies to bring to the table during the visioning and design of educational facilities while prioritizing personal connections.



Education & Aviation

Schools vs. Airports

- Concentrated peak times
- Students, staff, parents, vendors
- Active shooter, gangs, bullying, harassment, drugs
- Varied ages and activities
- Single point of entry preferred
- Minimal intrusion

- High volume all day
- Passengers, crew, staff, vendors
- Active shooter, explosives, hostage
- Airplanes, public areas, secure areas
- Distributed points of entry preferred
- Equal and fair security measures

SCHOOLS **AIRPORTS**

Security Challenges

1

TRAFFIC VOLUME

2

VARIED USERS

3

THREAT TYPE & SIZE

4

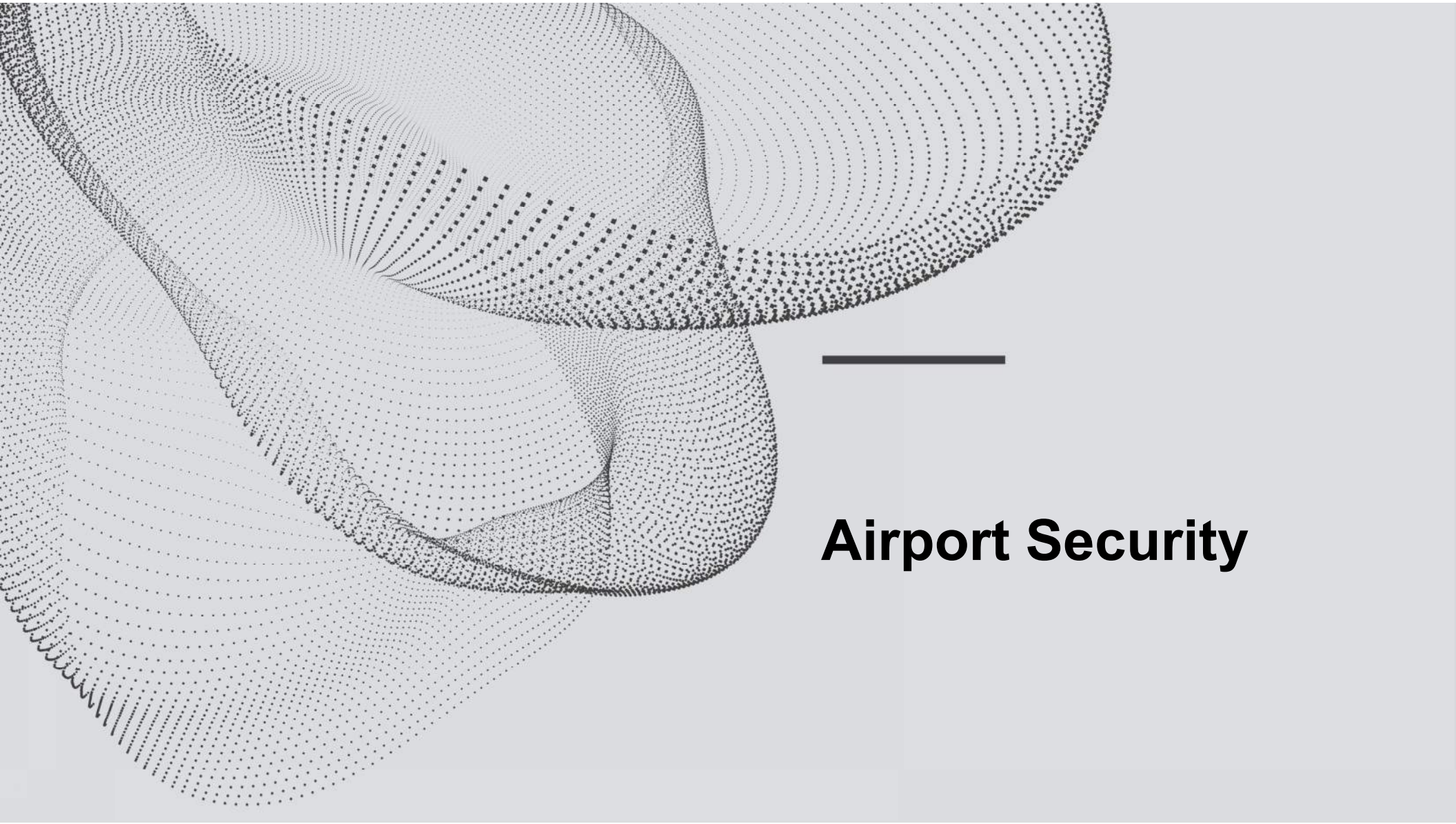
COMPLEX ENVIRONMENTS

5

EMOTIONAL WELL-BEING

6

MULTIPLE ENTRY POINTS



Airport Security

History of Aviation Security

Aug. 1974: Congress passes the Air Transportation Security Act, introducing and requiring metal detectors and X-ray screening of carry-on bags at all US airports

Before 9/11 and TSA: Bulletproof and locked cockpit doors were not standard. After TSA, they became standard procedures.

After 9/11: Cockpit doors were locked to prevent hijackers.

Nov. 2001: Transportation Security Administration (TSA) is created.

2001: Richard Reid tries to ignite explosives hidden in his shoes on a flight from Paris to Miami.
2006: TSA requires shoes to be removed.

Aug. 2006: TSA banned all liquid after finding terror plots for liquid explosives.
Sept. 2006: TSA changes its ban on all liquids to allow 3oz containers packed into 1qt Ziploc bags, known as the 3-1-1 rule.

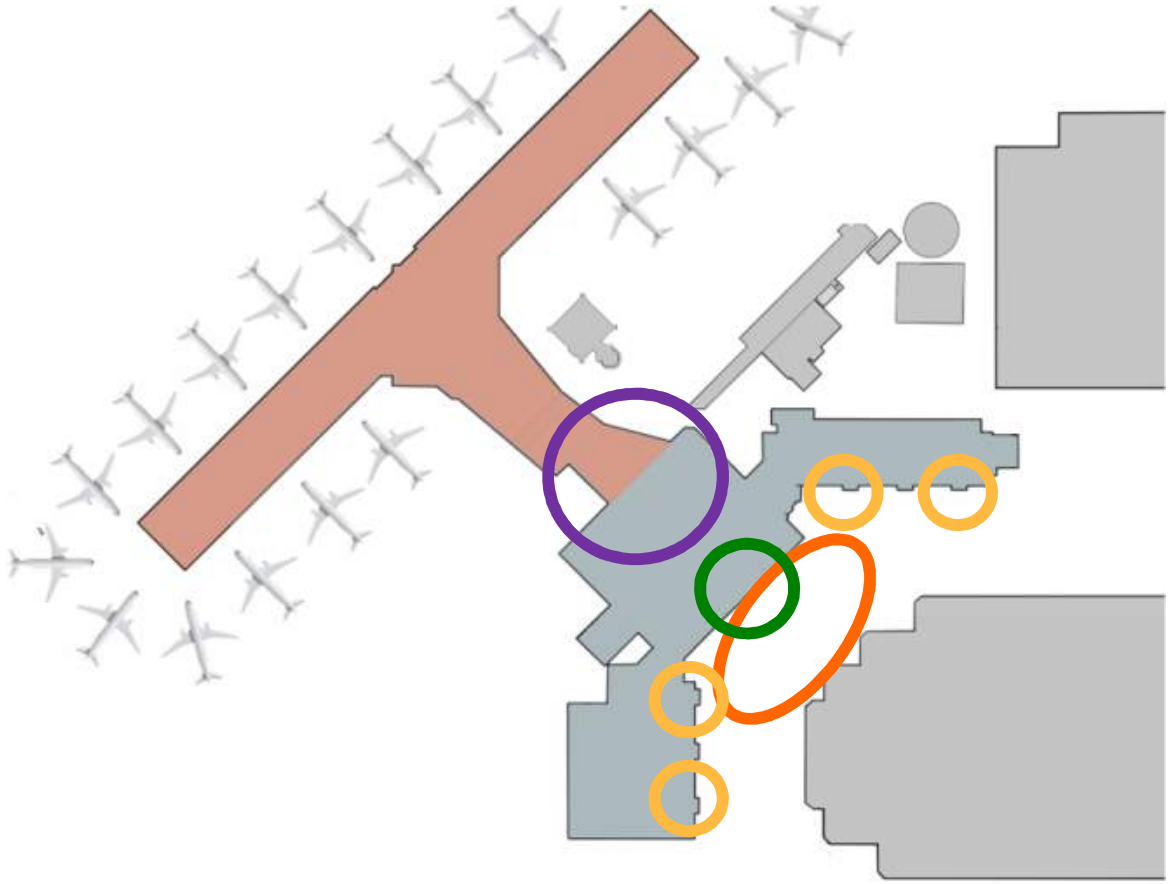
Dec. 2009: TSA calls for the implementation of full-body scanners.

2009-2010: Belts required to be removed at metal detectors.

APPROACH

ENTRY

INTERIOR



Approach Security

- Check in on the way to the airport
- Facial recognition
- Security checkpoint though iris recognition
- Backpack/baggage pre-screened in trunk
- Separated drop-off to avoid screening at the site

Seamless Gate

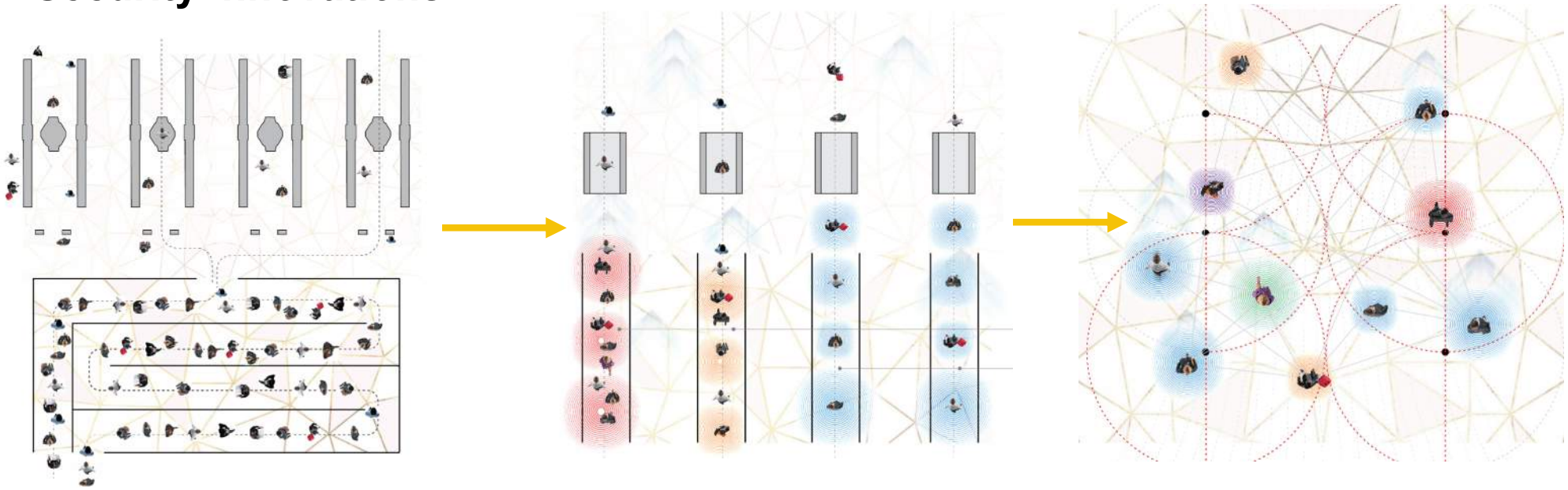
- Contactless
- Non-intrusive
- On-the-move identification
- No need to show travel documents
- Implement at security checkpoint, boarding, and lounge access

Molecular Scanner

- Works from a distance of 164 feet
- Scans through clothing and other organic material
- Scans multiple people at once

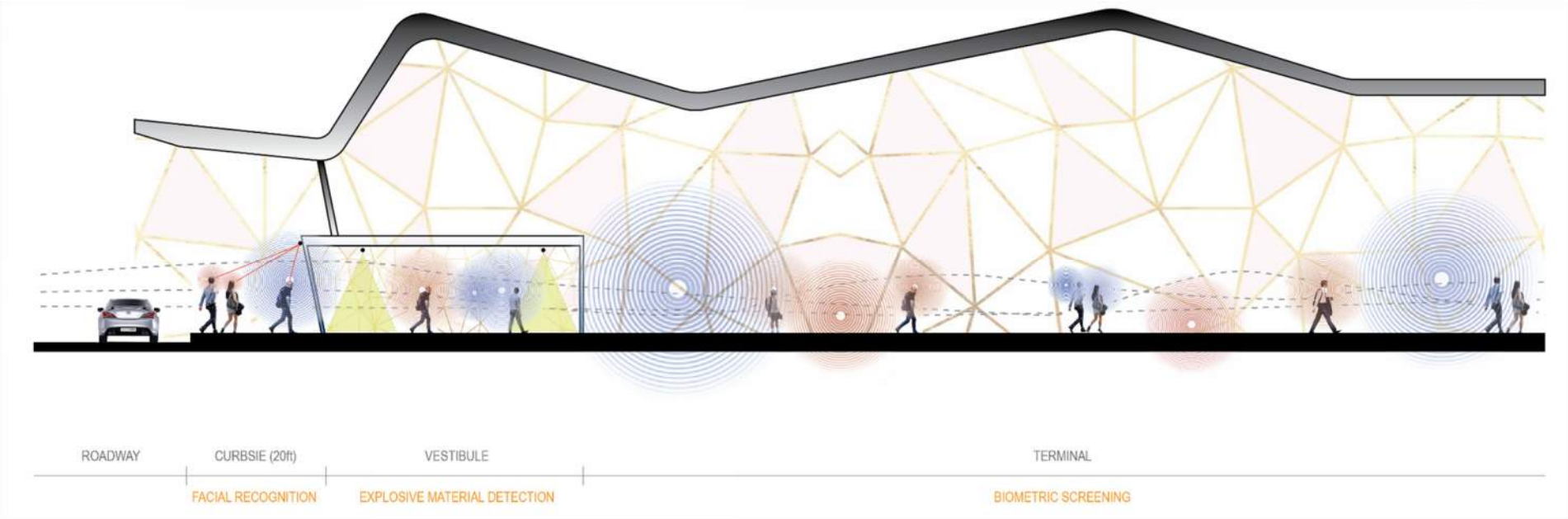
Streamlining Processes

Security Innovations



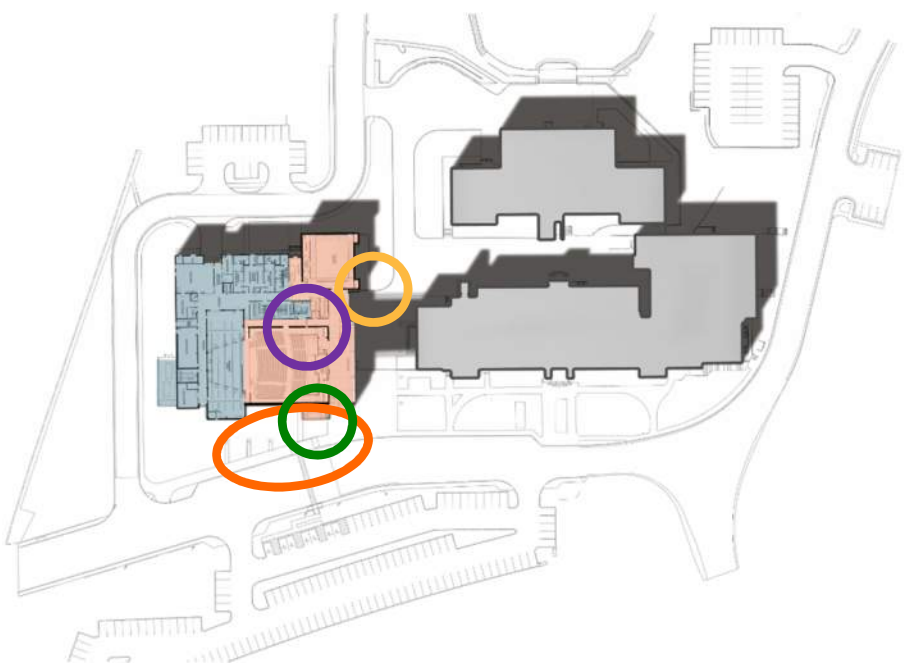
Streamlining Processes

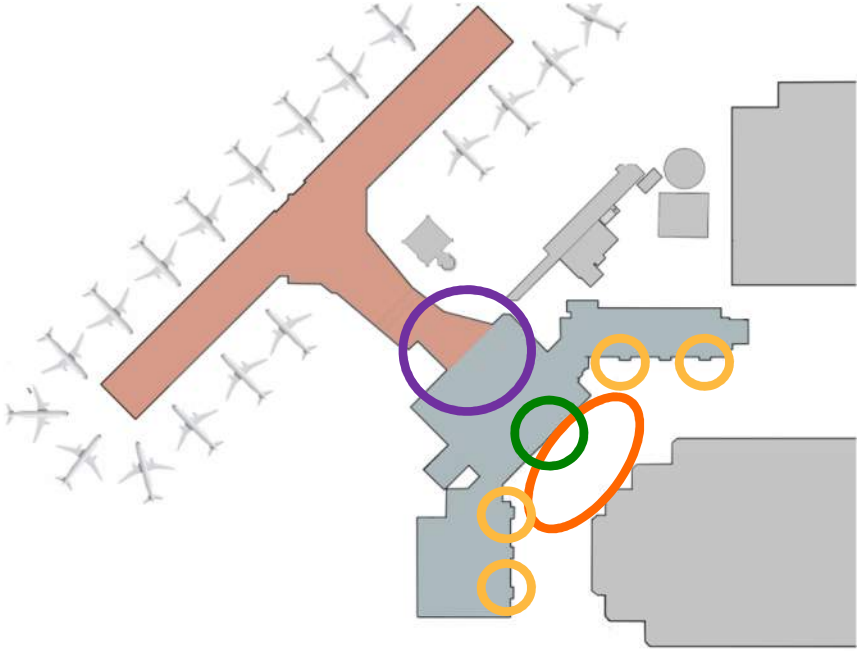
Security Innovations



Future of Security for Schools

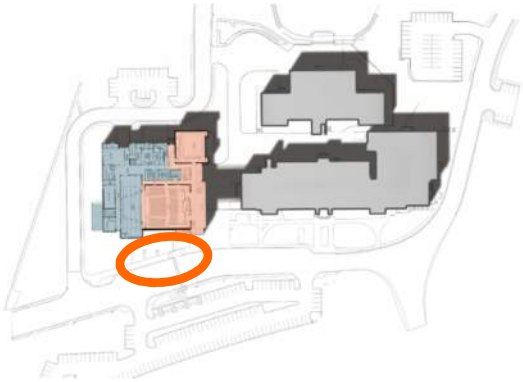
School vs. Airport

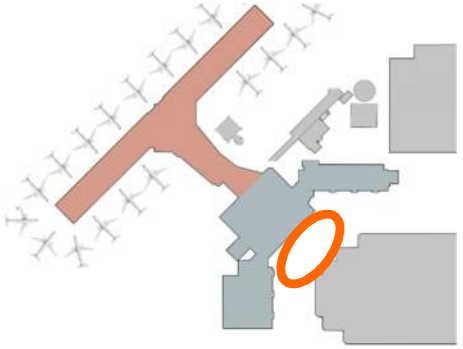


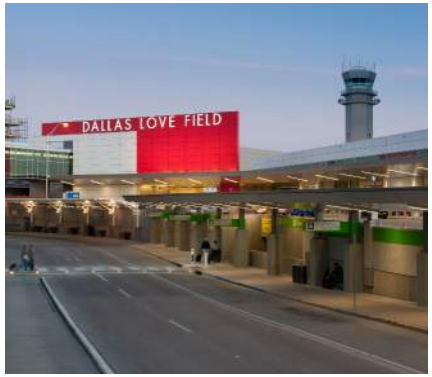


Perimeter Approach

School vs. Airport







Education Challenges

Provide for threat recognition prior to gaining entry to building

Perimeter Approach

Current Strategies & Goals

Parking lot and front door cameras

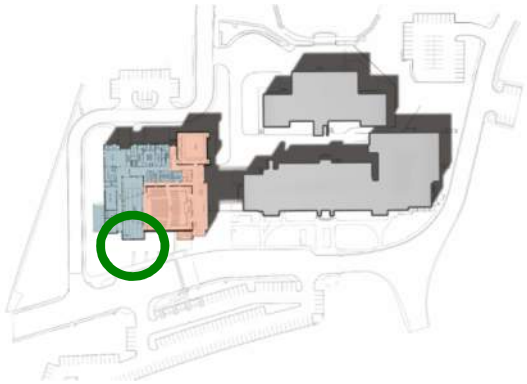
- Bollards to keep cars away from front door
- View of people approaching
- Monitoring traffic flow

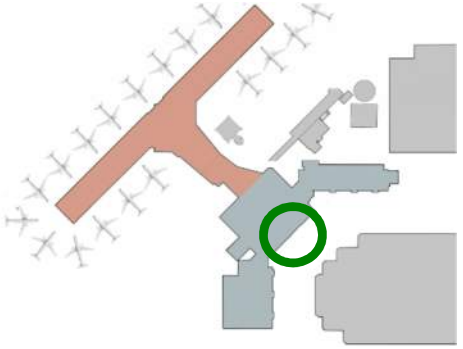
Aviation Strategy Integration

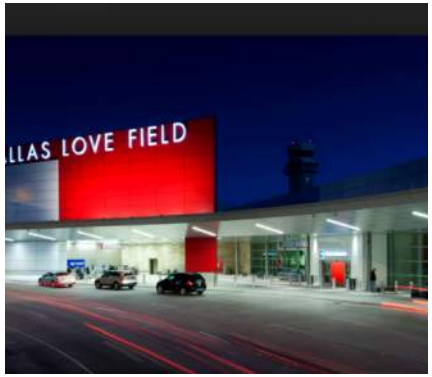
- Limit the number of approach paths
- Security integrated into bollards and parking lot lights/cameras
- Monitor traffic flow and tendencies to better allocate resources
- Pre-screen wherever opportunities exist
- Screened multiple times
- Allow busses outside a secure perimeter so only kids gets through

Main Entry

School vs. Airport







Main Entry

Education Challenges

- Reduce bottle-necks and delays entering at peak times
- Effectively screen the variety of methods students arrive
- Threats vary by age group; can be external or internal
- Provide less intrusive security measures to ensure a nurturing environment

Main Entry

Current Strategies & Goals

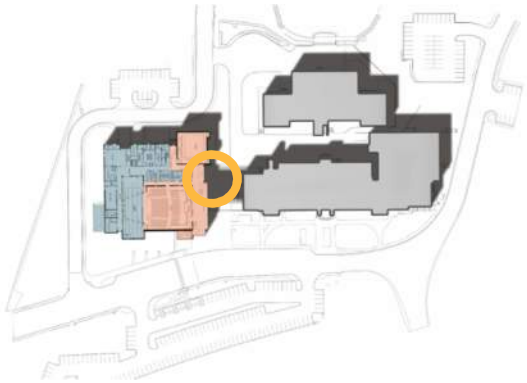
Main Entry

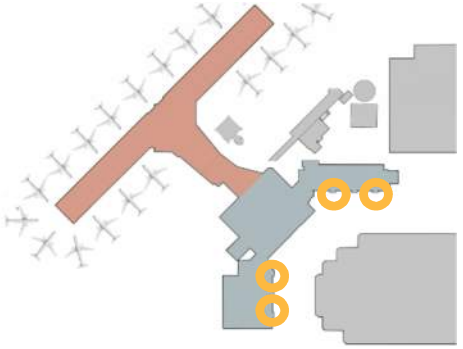
Aviation Strategy Integration

- Reduction at main entry due to separation of “pre-screen”
- Passive systems are able to identify higher risk for additional screening
- Bag/backpack drop-off at door (or prior) for screening and delivery to pick-up location
- Mobile screening systems that can be set up and taken down for peak times or special events

Secondary Entries

School vs. Airport





Education Challenges

- Must be monitored/restricted to prevent unauthorized use
- Multiple exits required by codes to allow for safe evacuation in an emergency
- Doors can be left/propped open bypassing security
- People using exits can allow entry by someone unscreened

Secondary Entries

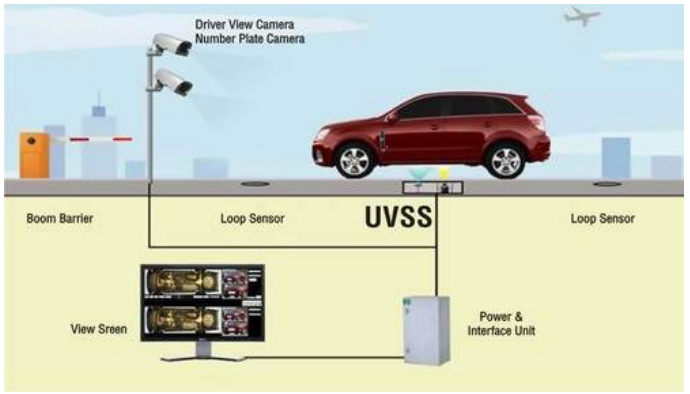
Current Strategies & Goals

- Restricted with card readers
- Monitored by access control system that can send alerts if left open

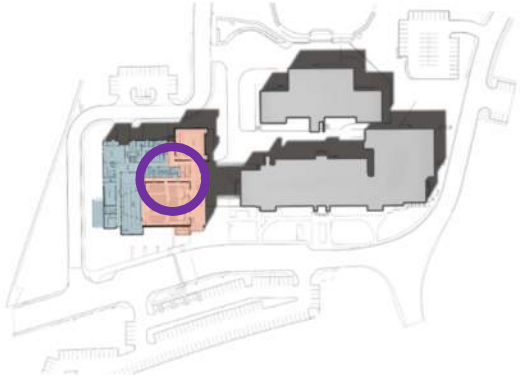
Secondary Entries

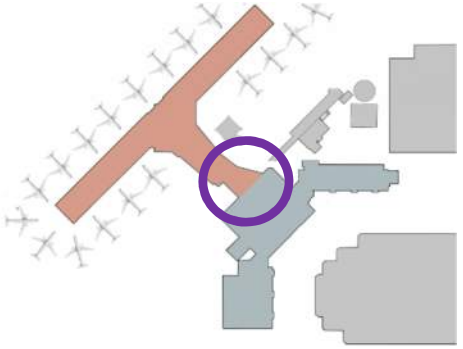
Aviation Strategy Integration

- Have clearly defined public vs secure areas. After hours and weekend security
- Instead of physical badges use fingerprint, facial recognition, iris scanning for entry
- Third level of security where neither public nor students should go such as xipher locks
- Cameras embedded in concrete to scan the bottom of delivery truck for bombs
- Scanning of items delivered



School vs. Airport





Education Challenges

- Threat detection from someone who has access to the building
- Allocation of limited security resources
- Eliminate hiding places while providing security
- Create a positive climate in the classroom including fresh air and natural light

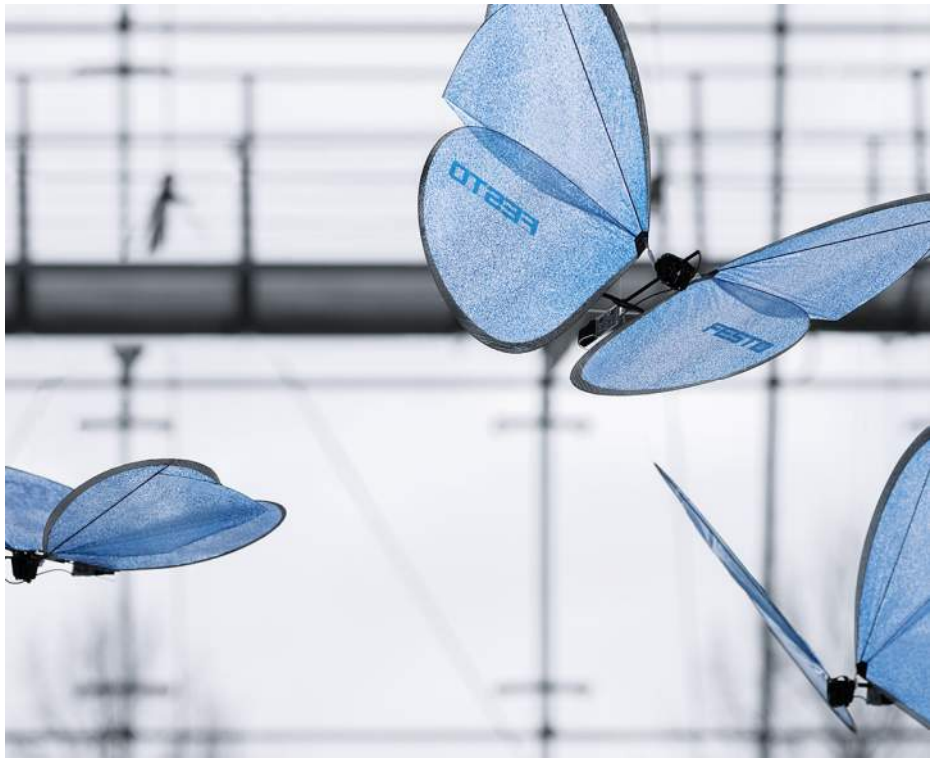
Current Strategies & Goals

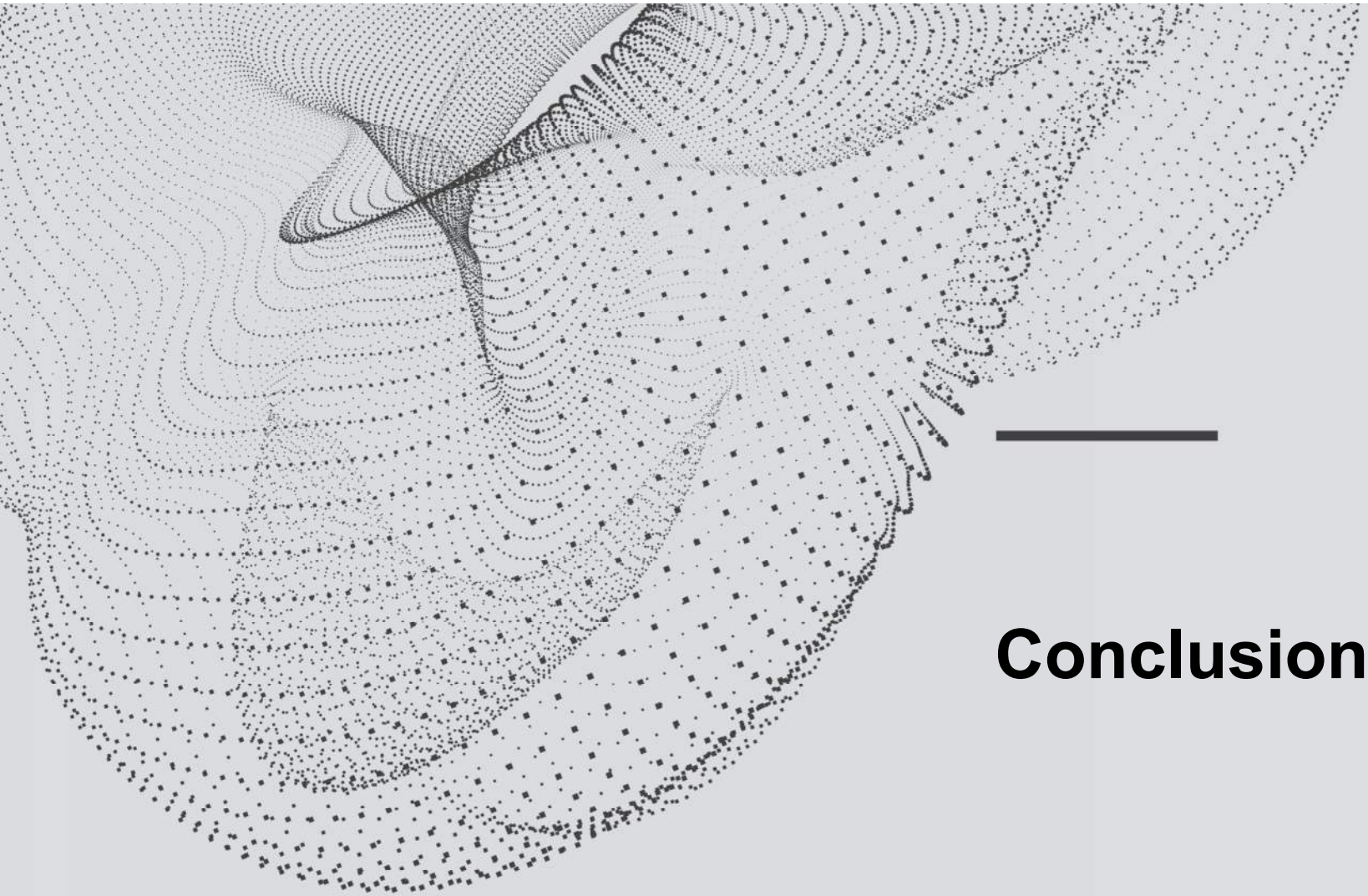
- Design should minimize concealed areas and encourage staff supervision
- Security cameras
- Student resource officer patrol, where available or peer-to-peer engagement

Environmental Monitoring — Secure Area

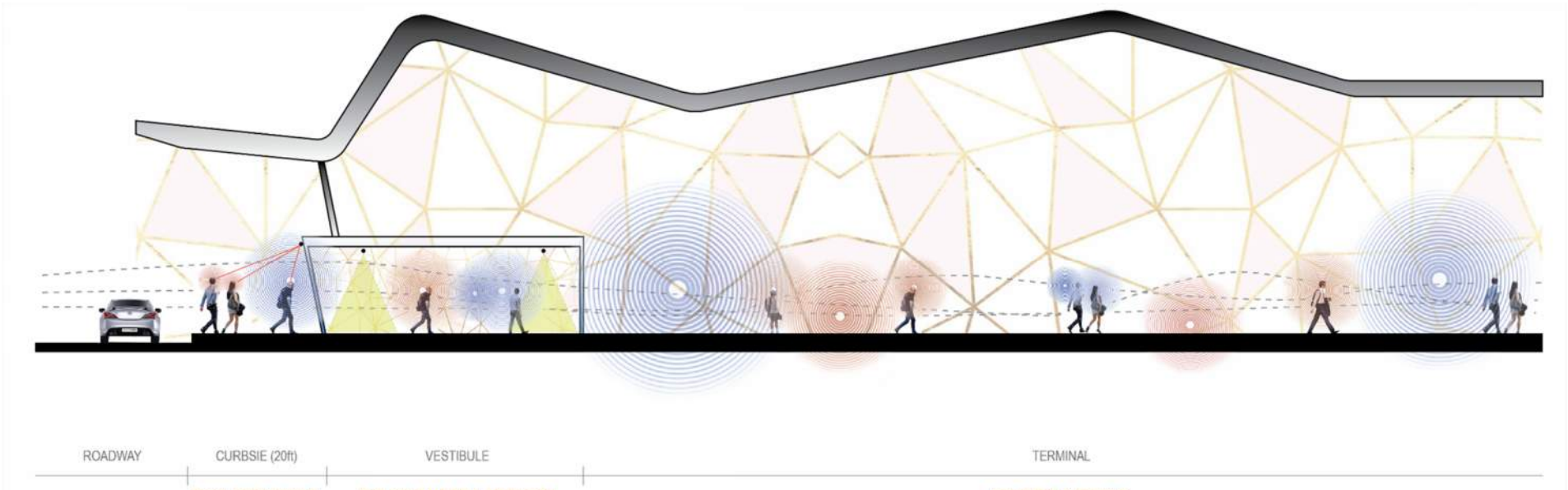
Aviation Strategy Integration

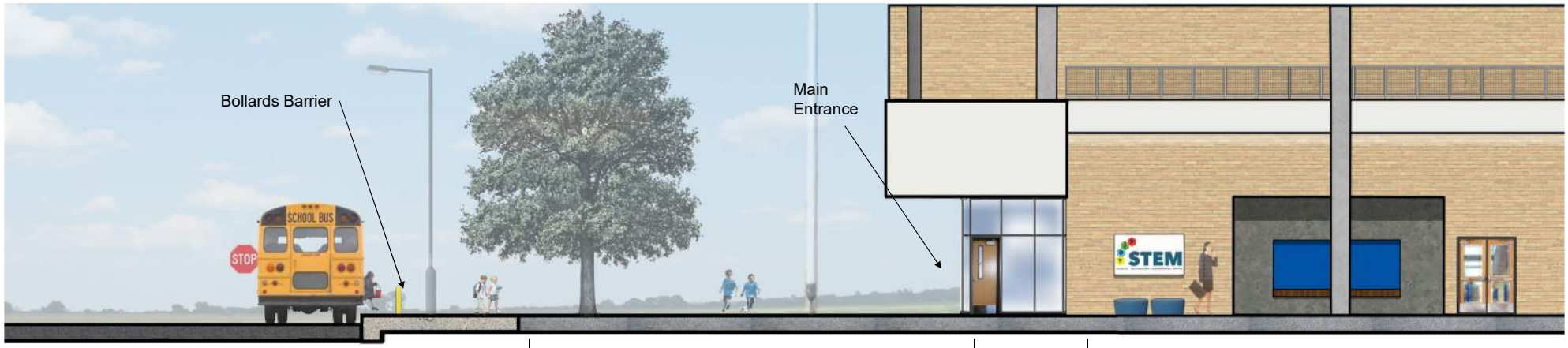
- Biometric monitoring for increased heart rates, nervousness, for detection of individual needing additional screening
- Robotic drones can monitor the building and compensate for limited security personnel
- Major arteries and hallways can be turned into digital tunnels with interactive, engaging displays, while scanning to clear students or identify threats
- Inspired by baggage valets at airports, lockers can have built in scanning capabilities





Conclusion


ROADWAY
CURBSIE (20ft)
VESTIBULE
TERMINAL



Bus Drop Off | Sidewalk | Building Yard | Security Vestibule | Building Interior

First Layer of Defense

Second Layer of Defense

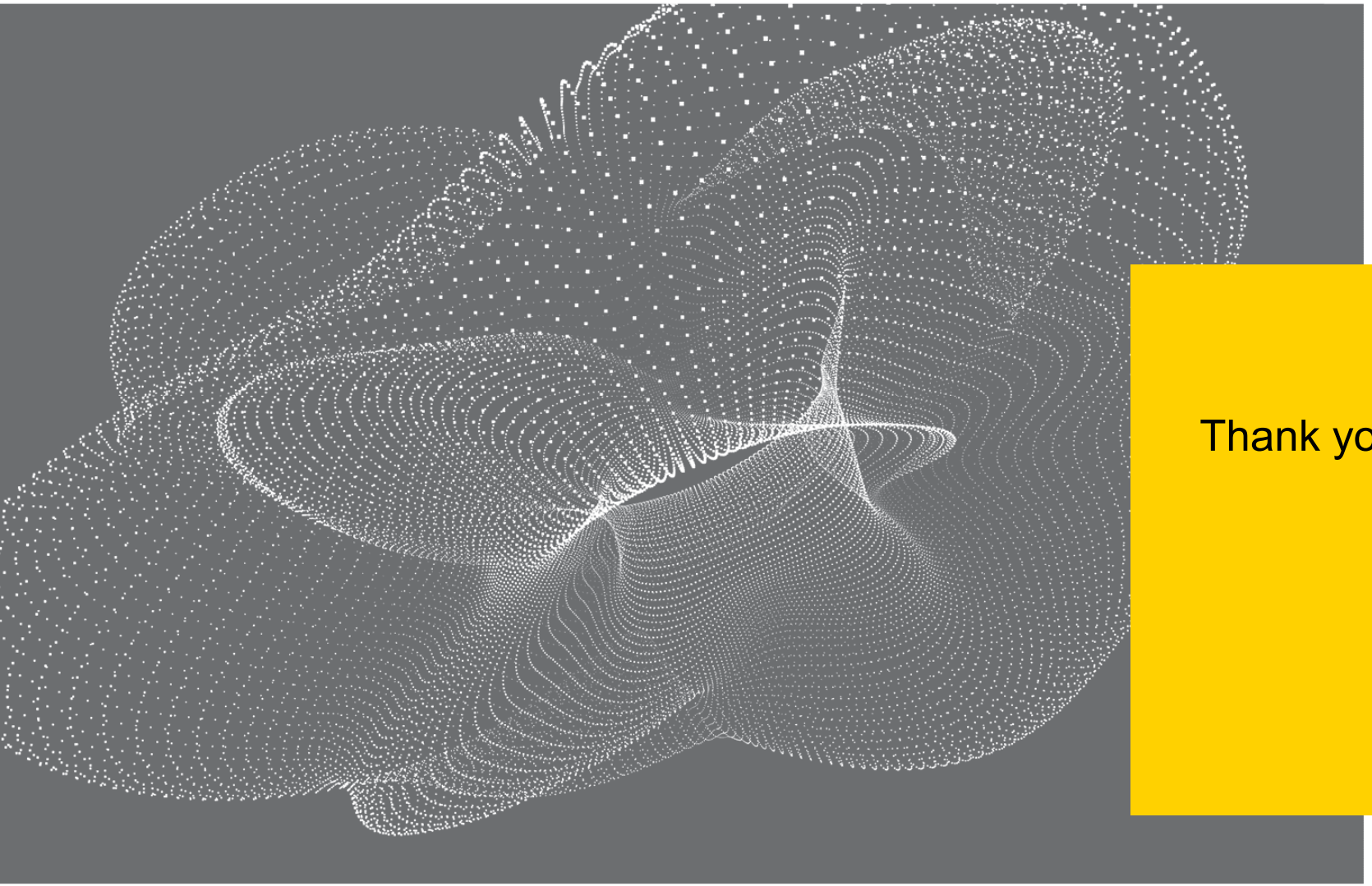
Third Layer of Defense

Mental & Emotional Health

- Concept of “security as service”
- Balance between security as a deterrent and security as protective
- Preserving a welcoming, nurturing community
- Decrease isolation
- Create a positive classroom climate
- Eliminate places to hide

Security is Communal

- “See Something, Say Something” campaign
- Glass walls, open space, minimizing concealed spaces
- Security protocol manuals with periodic reviews to assess site deviations, maintenance, and security upgrades of existing
- Technology can’t replace the need for human “tips” which must have a process to get to the correct authorities



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